

The WB-57 with HIRAD aboard flew T.S. Karl on 16 Sept 2010, with take-off at 12:35 CDT (1735 UTC) and landing at 2327 UTC.

The flight pattern flown was one of two butterflies, with the second one shifted west by approximately 50 km and without a center E-W leg. (Thus, the flight was actually 1 and 2/3 butterflies.) This allowed HIRAD to observe data swaths that had a slight overlap, or at least touched. See the figure below.

The flight was nominal in all respects. It is noted that there was some chat traffic wondering why we weren't going through the storm center on one of legs. The reason is that we were trying to have overlapping swaths, rather than necessarily flying through the center on each leg. The weird dog leg that occurred on the last W-E leg (about where the label 19deg15'N appears in the middle of the figure) was due to our lateness in reaching the aircraft to tell them to make that leg a little further south. They went ahead and did that, even though they had already begun the leg.

Note that there are many locations of correlative measurements with both the DC-8 and the Global Hawk.

One anomaly to report is the reporting of aircraft altitude. The WB-57 crew reported flying this entire pattern at ~55,000 feet, kept low due to the proximity of the Global Hawk. RTMM, however, reported the altitude as ~17.5 km, which is a little over 57,000 feet. This will need to be sorted out for our data analysis. Also, there is some concern that if the WB and GH are together on a future flight, we need to make sure the crew has accurate knowledge of their altitude.

